

wherein:

(a) Z is oxygen,  $\text{NX}_1$ , or sulfur, where  $\text{X}_1$  is selected from the group consisting of hydrogen, saturated or unsaturated alkyl, and five-membered or six-membered heteroaryl or six-membered aryl ring moieties;

(b) n is 0, 1, 2, 3, or 4;

(c)  $\text{A}_2$ ,  $\text{A}_3$ ,  $\text{A}_4$  and  $\text{A}_5$  are independently selected from the group consisting of carbon, nitrogen, oxygen, and sulfur,

provided that if any of  $\text{A}_2$ ,  $\text{A}_3$ ,  $\text{A}_4$  and  $\text{A}_5$  is nitrogen, oxygen, or sulfur, said  $\text{A}_2$ ,  $\text{A}_3$ ,  $\text{A}_4$  and  $\text{A}_5$  is not substituted with  $\text{R}_6$ ,  $\text{R}_7$ ,  $\text{R}_8$  or  $\text{R}_9$ ;

$\text{A}_1$  is nitrogen or carbon;

(d)  $\text{R}_1$ ,  $\text{R}_2$ ,  $\text{R}_3$ ,  $\text{R}_4$ ,  $\text{R}_5$ ,  $\text{R}_6$ ,  $\text{R}_7$ ,  $\text{R}_8$  and  $\text{R}_9$  are independently selected from the group consisting of:

(i) hydrogen;

(ii) saturated or unsaturated alkyl;

(iii)  $\text{NX}_2\text{X}_3$ , where  $\text{X}_2$  and  $\text{X}_3$  are independently selected from the group consisting of hydrogen, saturated or unsaturated alkyl, and five-membered or six-membered heteroaryl or six-membered aryl ring moieties;

(iv) benzyl;

(v) halogen or trihalomethyl;

(vi) a ketone of formula  $-\text{CO}-\text{X}_4$ , where  $\text{X}_4$  is selected from the group consisting of hydrogen, alkyl, and five-membered or six-membered heteroaryl or six-membered aryl ring moieties;

(vii) a carboxylic acid of formula  $-(\text{X}_5)_{n5}-\text{COOH}$  or ester of formula  $-(\text{X}_6)_{n6}-\text{COOX}_7$ , where  $\text{X}_5$ ,  $\text{X}_6$ , and  $\text{X}_7$  are independently selected from the group consisting of alkyl and five-membered or six-membered heteroaryl or six-membered aryl ring moieties and where  $n5$  and  $n6$  are each independently 0 or 1;

(viii) an alcohol of formula  $-(X_8)_{n8}-OH$  or an alkoxy moiety of formula  $-(X_8)_{n8}-OX_9$ , where  $X_8$  and  $X_9$  are independently selected from the group consisting of alkyl and five-membered or six-membered heteroaryl or six-membered aryl ring moieties and where  $n8$  is 0 or 1, and where said ring moieties are optionally substituted with one or more substituents selected from the group consisting of alkyl, halogen, trihalomethyl, carboxylate, and ester;

(ix)  $-NHCOX_{10}$ , where  $X_{10}$  is selected from the group consisting of alkyl, hydroxyl, and five-membered or six-membered heteroaryl or six-membered aryl ring moieties, wherein said ring moieties are optionally substituted with one or more substituents selected from the group consisting of alkyl, halogen, trihalomethyl, carboxylate, and ester;

C1 (x)  $-SO_2NX_{11}X_{12}$ , where  $X_{11}$  and  $X_{12}$  are selected from the group consisting of hydrogen, alkyl, and five-membered or six-membered heteroaryl or six-membered aryl ring moieties; and

(xi) a five-membered or six-membered heteroaryl or six-membered aryl ring moiety optionally substituted with one or more substituents selected from the group consisting of alkyl, halogen, trihalomethyl, carboxylate, and ester moieties;

(xii)  $-OX_7$ , where  $X_7$  is selected from the group consisting of hydrogen, saturated or unsaturated alkyl, and a five-membered or six-membered aryl or heteroaryl ring moiety;

(e) any adjacent  $R_3$ ,  $R_4$ , and  $R_5$  or any adjacent  $R_6$ ,  $R_7$ ,  $R_8$ , and  $R_9$  are fused together to form a five-membered or six-membered heteroaryl or six-membered aryl ring moiety, wherein said five-membered or six-membered heteroaryl or six-membered aryl ring comprises two carbon atoms of said quinazoline-based compound to which  $R_3$ ,  $R_4$ , and  $R_5$  or  $R_6$ ,  $R_7$ ,  $R_8$ , and  $R_9$  are attached; and

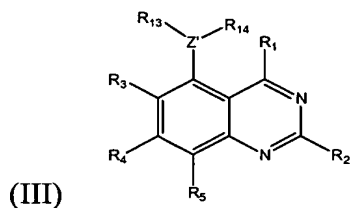
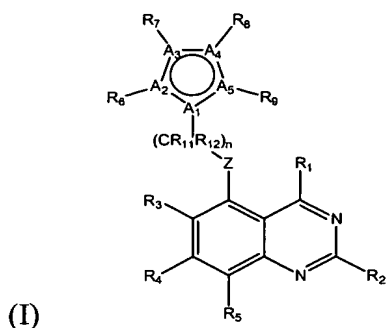
(f)  $R_{11}$  and  $R_{12}$  are independently selected from the group consisting of

(i) hydrogen;

(ii) saturated or unsaturated alkyl; and

(g)  $Z'$  is carbon or nitrogen and  $R_{13}$  and  $R_{14}$  taken together form a five-membered or six-membered heteroaryl ring with  $Z'$  as a ring member, wherein said ring is optionally substituted with one, two or three alkyl, halogen, trihalomethyl, carboxylate, and ester moieties.

C2 11. (Twice amended) The method of claim 1, wherein said quinazoline-based compound has the formula set forth in structure I or III:

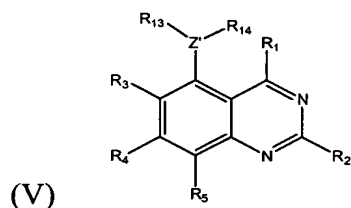


wherein:

- C2
- (a) Z is oxygen,  $\text{NX}_1$ , or sulfur, where  $\text{X}_1$  is selected from the group consisting of hydrogen and saturated or unsaturated alkyl;
  - (b) n is 0, 1 or 2;
  - (c)  $\text{A}_2$ ,  $\text{A}_3$ ,  $\text{A}_4$  and  $\text{A}_5$  are independently selected from the group consisting of carbon, nitrogen, oxygen, and sulfur, provided that if any of  $\text{A}_2$ ,  $\text{A}_3$ ,  $\text{A}_4$  and  $\text{A}_5$  is nitrogen, oxygen, or sulfur, said  $\text{A}_2$ ,  $\text{A}_3$ ,  $\text{A}_4$  and  $\text{A}_5$  is not substituted with  $\text{R}_6$ ,  $\text{R}_7$ ,  $\text{R}_8$  or  $\text{R}_9$ ;  $\text{A}_1$  is carbon or nitrogen;
  - (d)  $\text{R}_1$  and  $\text{R}_2$  are independently selected from the group consisting of:
    - (i) hydrogen;
    - (ii) saturated or unsaturated alkyl;
    - (iii)  $\text{NX}_2\text{X}_3$ , where  $\text{X}_2$  and  $\text{X}_3$  are independently selected from the group consisting of hydrogen and saturated or unsaturated alkyl;
    - (iv) halogen or trihalomethyl; and
    - (v) five-membered or six-membered heteroaryl ring moiety;
  - (e)  $\text{R}_3$ ,  $\text{R}_4$ ,  $\text{R}_5$ ,  $\text{R}_6$ ,  $\text{R}_7$ ,  $\text{R}_8$  and  $\text{R}_9$  are independently selected from the group consisting of:
    - (i) hydrogen;
    - (ii) saturated or unsaturated alkyl;

- (iii)  $NX_4X_5$ , where  $X_4$  and  $X_5$  are independently selected from the group consisting of hydrogen and saturated or unsaturated alkyl;
- (iv) halogen or trihalomethyl;
- (v)  $C(X_6)_3$  where  $X_6$  is selected from the group consisting of fluorine, chlorine, bromine and iodine; and
- (vi)  $-OX_7$ , where  $X_7$  is selected from the group consisting of hydrogen, saturated or unsaturated alkyl, and a five-membered or six-membered aryl or heteroaryl ring moiety;
- (f) any adjacent  $R_3$ ,  $R_4$ , and  $R_5$  or any adjacent  $R_6$ ,  $R_7$ ,  $R_8$  and  $R_9$  are fused together to form a five-membered or six-membered heteroaryl or six-membered aryl ring moiety, wherein said five-membered or six-membered heteroaryl or six-membered aryl ring comprises two carbon atoms of said quinazoline-based compound to which  $R_3$ ,  $R_4$ , and  $R_5$  or  $R_6$ ,  $R_7$ ,  $R_8$ , and  $R_9$  are attached;
- (g)  $R_{11}$  and  $R_{12}$  are independently selected from the group consisting of
- (i) hydrogen;
  - (ii) saturated or unsaturated alkyl; and
- (h)  $Z'$  is nitrogen and  $R_{13}$  and  $R_{14}$  taken together form a five-membered or six-membered heteroaryl ring with  $Z'$  as a ring member, wherein said ring is optionally substituted with one, two, or three alkyl, halogen, trihalomethyl, carboxylate, and ester moieties.

12. (Twice amended) The method of claim 1, wherein said quinazoline-based compound has the formula set forth in formula V:



wherein:

- (a)  $R_1$  and  $R_2$  are independently selected from the group consisting of:
- (i) hydrogen;
  - (ii)  $NX_2X_3$ , where  $X_2$  and  $X_3$  are independently selected from the group consisting of hydrogen and saturated or unsaturated alkyl; and

(iii) benzyl;

(b)  $R_3$ ,  $R_4$ , and  $R_5$  are independently selected from the group consisting of:

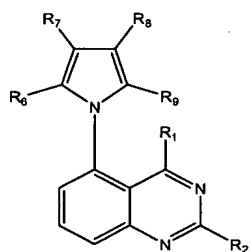
(i) hydrogen;

(ii) saturated or unsaturated alkyl; and

(iii)  $NX_2X_3$ , where  $X_2$  and  $X_3$  are independently selected from the group consisting of hydrogen and saturated or unsaturated alkyl; and

(c)  $Z'$  is nitrogen and  $R_{13}$  and  $R_{14}$  taken together form a five-membered heteroaryl ring.

15. (Amended) The method of claim 1, wherein said quinazoline-based compound has a structure set forth in formula X:



(X)

wherein

(a)  $R_1$  and  $R_2$  are independently selected from the group consisting of hydrogen,  $-NH_2$ , provided at least one of  $R_1$  and  $R_2$  is  $-NH_2$ ;

(b)  $R_6$ ,  $R_7$ ,  $R_8$ , and  $R_9$  are independently selected from the group consisting of

(i) hydrogen;

(ii) saturated or unsaturated alkyl;

(iii)  $NX_2X_3$ , where  $X_2$  and  $X_3$  are independently selected from the group consisting of hydrogen and saturated or unsaturated alkyl;

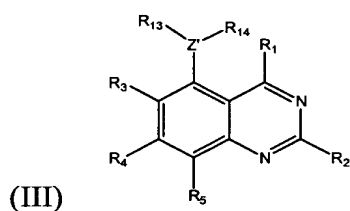
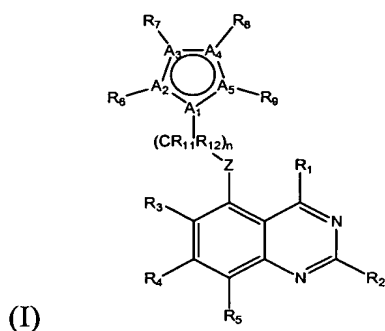
(iv) halogen;

(v)  $C(X_6)_3$ , where  $X_6$  is selected from the group consisting of fluorine, chlorine, bromine, and iodine; and

(vi)  $OX_7$ , where  $X_7$  is selected from the group consisting of hydrogen, saturated or unsaturated alkyl, and a five-membered or six-membered aryl or heteroaryl ring moiety.

17. (Twice amended) A method of treating an abnormal condition in an organism in need thereof, wherein said abnormal condition is a disease associated with an aberration in a signal transduction pathway characterized by an interaction between a

serine/threonine protein kinase and a natural binding partner, said method comprising the step of administering a quinazoline-based compound of formula I or III to said organism:



wherein:

(a) Z is oxygen,  $\text{NX}_1$ , or sulfur, where  $\text{X}_1$  is selected from the group consisting of hydrogen, saturated or unsaturated alkyl, and five-membered or six-membered heteroaryl or six-membered aryl ring moieties;

(b) n is 0, 1, 2, 3, or 4;

(c)  $\text{A}_2$ ,  $\text{A}_3$ ,  $\text{A}_4$  and  $\text{A}_5$  are independently selected from the group consisting of carbon, nitrogen, oxygen, and sulfur,

provided that if any of  $\text{A}_2$ ,  $\text{A}_3$ ,  $\text{A}_4$  and  $\text{A}_5$  is nitrogen, oxygen, or sulfur, said  $\text{A}_2$ ,  $\text{A}_3$ ,  $\text{A}_4$  and  $\text{A}_5$  is not substituted with  $\text{R}_6$ ,  $\text{R}_7$ ,  $\text{R}_8$  or  $\text{R}_9$ ;

$\text{A}_1$  is carbon or nitrogen;

(d)  $\text{R}_1$ ,  $\text{R}_2$ ,  $\text{R}_3$ ,  $\text{R}_4$ ,  $\text{R}_5$ ,  $\text{R}_6$ ,  $\text{R}_7$ ,  $\text{R}_8$  and  $\text{R}_9$  are independently selected from the group consisting of:

(i) hydrogen;

(ii) saturated or unsaturated alkyl;

(iii)  $\text{NX}_2\text{X}_3$ , where  $\text{X}_2$  and  $\text{X}_3$  are independently selected from the group consisting of hydrogen, saturated or unsaturated alkyl, and five-membered or six-membered heteroaryl or six-membered aryl ring moieties;

(iv) halogen or trihalomethyl;

(v) a ketone of formula  $-\text{CO}-\text{X}_4$ , where  $\text{X}_4$  is selected from the group consisting of hydrogen, alkyl, and five-membered or six-membered heteroaryl or six-membered aryl ring moieties;

(vi) a carboxylic acid of formula  $-(\text{X}_5)_{n5}-\text{COOH}$  or ester of formula  $-(\text{X}_6)_{n6}-\text{COOX}_7$ , where  $\text{X}_5$ ,  $\text{X}_6$ , and  $\text{X}_7$  are independently selected from the group consisting of alkyl and five-membered or six-membered heteroaryl or six-membered aryl ring moieties and where  $n5$  and  $n6$  are each independently 0 or 1;

(vii) an alcohol of formula  $-(\text{X}_8)_{n8}-\text{OH}$  or an alkoxy moiety of formula  $-(\text{X}_8)_{n8}-\text{OX}_9$ , where  $\text{X}_8$  and  $\text{X}_9$  are independently selected from the group consisting of alkyl and five-membered or six-membered heteroaryl or six-membered aryl ring moieties and where  $n8$  is 0 or 1, and where said ring moieties are optionally substituted with one or more substituents selected from the group consisting of alkyl, halogen, trihalomethyl, carboxylate, and ester;

C4 (viii)  $-\text{NHCOX}_{10}$ , where  $\text{X}_{10}$  is selected from the group consisting of alkyl, hydroxyl, and five-membered or six-membered heteroaryl or six-membered aryl ring moieties, wherein said ring moieties are optionally substituted with one or more substituents selected from the group consisting of alkyl, halogen, trihalomethyl, carboxylate, and ester;

(ix)  $-\text{SO}_2\text{NX}_{11}\text{X}_{12}$ , where  $\text{X}_{11}$  and  $\text{X}_{12}$  are selected from the group consisting of hydrogen, alkyl, and five-membered or six-membered heteroaryl or six-membered aryl ring moieties; and

(x) a five-membered or six-membered heteroaryl or six-membered aryl ring moiety optionally substituted with one or more substituents selected from the group consisting of alkyl, halogen, trihalomethyl, carboxylate, and ester moieties;

(e) any adjacent  $\text{R}_3$ ,  $\text{R}_4$ , and  $\text{R}_5$  or any adjacent  $\text{R}_6$ ,  $\text{R}_7$ ,  $\text{R}_8$ , and  $\text{R}_9$  are fused together to form a five-membered or six-membered heteroaryl or six-membered aryl ring moiety, wherein said five-membered or six-membered heteroaryl or six-membered aryl ring comprises two carbon atoms of said quinazoline-based compound to which  $\text{R}_3$ ,  $\text{R}_4$ , and  $\text{R}_5$  or  $\text{R}_6$ ,  $\text{R}_7$ ,  $\text{R}_8$ , and  $\text{R}_9$  are attached;

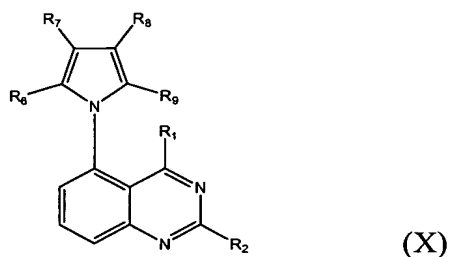
(f)  $\text{R}_{11}$  and  $\text{R}_{12}$  are independently selected from the group consisting of

(i) hydrogen;

(ii) saturated or unsaturated alkyl; and

(g)  $\text{Z}'$  is carbon or nitrogen and  $\text{R}_{13}$  and  $\text{R}_{14}$  taken together form a five-membered or six-membered heteroaryl ring with  $\text{Z}'$  as a ring member.

20. (Amended) The method of claim 17, wherein said quinazoline-based compound has a structure set forth in formula X:



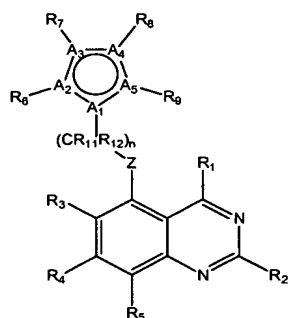
C5 wherein

- (a)  $R_1$  and  $R_2$  are independently selected from the group consisting of hydrogen and  $-NH_2$ , provided at least one of  $R_1$  and  $R_2$  is  $-NH_2$ ;
- (b)  $R_6$ ,  $R_7$ ,  $R_8$ , and  $R_9$  are independently selected from the group consisting of
  - (i) hydrogen;
  - (ii) saturated or unsaturated alkyl;
  - (iii)  $NX_2X_3$ , where  $X_2$  and  $X_3$  are independently selected from the group consisting of hydrogen and saturated or unsaturated alkyl;
  - (iv) halogen;
  - (v)  $C(X_6)_3$ , where  $X_6$  is selected from the group consisting of fluorine, chlorine, bromine, and iodine; and
  - (vi)  $OX_7$ , where  $X_7$  is selected from the group consisting of hydrogen, saturated or unsaturated alkyl, and a five-membered or six-membered aryl or heteroaryl ring moiety.

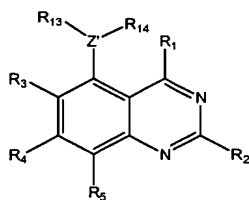
C6 23. (Amended) The method of claim 1, wherein said cancer is selected from the group consisting of lung cancer, ovarian cancer, breast cancer, brain cancer, intra-axial brain cancer, colon cancer, prostate cancer, Kaposi's sarcoma, melanoma, and glioma.

C7 26. (Twice amended) A quinazoline compound having the formula I or III:





(I)



(III)

67 wherein:

(i) Z is oxygen,  $NX_1$ , or sulfur, where  $X_1$  is selected from the group consisting of hydrogen, saturated or unsaturated alkyl, and five-membered or six-membered heteroaryl or six-membered aryl ring moieties;

(ii) n is 0, 1, 2, 3, or 4;

(iii)  $A_2$ ,  $A_3$ ,  $A_4$  and  $A_5$  are independently selected from the group consisting of carbon, nitrogen, oxygen, and sulfur,

provided that if any of  $A_2$ ,  $A_3$ ,  $A_4$  and  $A_5$  is nitrogen, oxygen, or sulfur, said  $A_2$ ,  $A_3$ ,  $A_4$  and  $A_5$  is not substituted with  $R_6$ ,  $R_7$ ,  $R_8$  or  $R_9$ ;

$A_1$  is carbon or nitrogen;

(iv)  $R_1$  and  $R_2$  are independently selected from the group consisting of:

(a) hydrogen;

(b) saturated or unsaturated alkyl;

(c)  $NX_2X_3$ , where  $X_2$  and  $X_3$  are independently selected from the group consisting of hydrogen and saturated or unsaturated alkyl;

(d) halogen or trihalomethyl; and

(e) five-membered or six-membered heteroaryl ring moiety;

(v)  $R_3$ ,  $R_4$ ,  $R_5$ ,  $R_6$ ,  $R_7$ ,  $R_8$  and  $R_9$  are independently selected from the group consisting of:

(a) hydrogen;

(b) saturated or unsaturated alkyl;

(c)  $\text{NX}_{13}\text{X}_{14}$ , where  $\text{X}_{13}$  and  $\text{X}_{14}$  are independently selected from the group consisting of hydrogen, saturated or unsaturated alkyl, and five-membered or six-membered aryl or heteroaryl ring moieties;

(d) halogen or trihalomethyl;

(e) a ketone of formula  $-\text{CO}-\text{X}_4$ , where  $\text{X}_4$  is selected from the group consisting of hydrogen, alkyl, and five-membered or six-membered heteroaryl or six-membered aryl ring moieties;

(f) a carboxylic acid of formula  $-(\text{X}_5)_{n5}-\text{COOH}$  or ester of formula  $-(\text{X}_6)_{n6}-\text{COOX}_7$ , where  $\text{X}_5$ ,  $\text{X}_6$ , and  $\text{X}_7$  are independently selected from the group consisting of alkyl and five-membered or six-membered heteroaryl or six-membered aryl ring moieties and where  $n5$  and  $n6$  are each independently 0 or 1;

(g) an alcohol of formula  $-(\text{X}_8)_{n8}-\text{OH}$  or an alkoxy moiety of formula  $-(\text{X}_8)_{n8}-\text{OX}_9$ , where  $\text{X}_8$  and  $\text{X}_9$  are independently selected from the group consisting of alkyl and five-membered or six-membered heteroaryl or six-membered aryl ring moieties and where  $n8$  is 0 or 1, and where said ring moieties are optionally substituted with one or more substituents selected from the group consisting of alkyl, halogen, trihalomethyl, carboxylate, and ester;

(h)  $-\text{NHCOX}_{10}$ , where  $\text{X}_{10}$  is selected from the group consisting of alkyl, hydroxyl, and five-membered or six-membered heteroaryl or six-membered aryl ring moieties, wherein said ring moieties are optionally substituted with one or more substituents selected from the group consisting of alkyl, halogen, trihalomethyl, carboxylate, and ester;

(i)  $-\text{SO}_2\text{NX}_{11}\text{X}_{12}$ , where  $\text{X}_{11}$  and  $\text{X}_{12}$  are selected from the group consisting of hydrogen, alkyl, and five-membered or six-membered heteroaryl or six-membered aryl ring moieties; and

(j) a five-membered or six-membered heteroaryl or six-membered aryl ring moiety optionally substituted with one or more substituents selected from the group consisting of alkyl, halogen, trihalomethyl, carboxylate, and ester moieties;

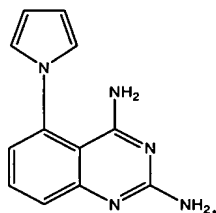
(vi) any adjacent  $\text{R}_3$ ,  $\text{R}_4$ , and  $\text{R}_5$  or any adjacent  $\text{R}_6$ ,  $\text{R}_7$ ,  $\text{R}_8$ , and  $\text{R}_9$  are fused together to form a five-membered or six-membered heteroaryl or six-membered aryl ring moiety, wherein said five-membered or six-membered heteroaryl or six-membered aryl ring comprises two carbon atoms of said quinazoline compound to which  $\text{R}_3$ ,  $\text{R}_4$ , and  $\text{R}_5$  or  $\text{R}_6$ ,  $\text{R}_7$ ,  $\text{R}_8$ , and  $\text{R}_9$  are attached;

(vii)  $\text{R}_{11}$  and  $\text{R}_{12}$  are independently selected from the group consisting of

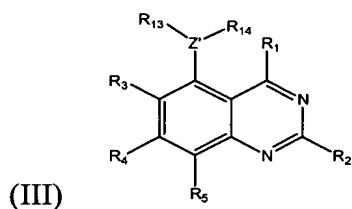
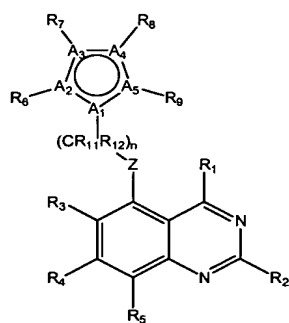
(i) hydrogen;

(ii) saturated or unsaturated alkyl; and

(viii) Z' is carbon or nitrogen and R<sub>13</sub> and R<sub>14</sub> taken together form a five-membered or six-membered heteroaryl ring with Z' as a ring member;  
with the proviso that the compound of formula (I) or (III) is not



27. (Twice amended) A quinazoline compound having the formula I or III:



wherein:

- (a) Z is oxygen, NX<sub>1</sub>, or sulfur, where X<sub>1</sub> is selected from the group consisting of hydrogen and saturated or unsaturated alkyl;
- (b) n is 0, 1, or 2;
- (c) A<sub>2</sub>, A<sub>3</sub>, A<sub>4</sub> and A<sub>5</sub> are independently selected from the group consisting of carbon, nitrogen, oxygen, and sulfur,  
provided that if any of A<sub>2</sub>, A<sub>3</sub>, A<sub>4</sub> and A<sub>5</sub> is nitrogen, oxygen, or sulfur, said A<sub>2</sub>, A<sub>3</sub>, A<sub>4</sub> and A<sub>5</sub> is not substituted with R<sub>6</sub>, R<sub>7</sub>, R<sub>8</sub> or R<sub>9</sub>;
- A<sub>1</sub> is carbon or nitrogen;
- (d) R<sub>1</sub> and R<sub>2</sub> are independently selected from the group consisting of:
  - (i) hydrogen;

(ii) saturated or unsaturated alkyl;  
 (iii)  $NX_2X_3$ , where  $X_2$  and  $X_3$  are independently selected from the group consisting of hydrogen and saturated or unsaturated alkyl;  
 (iv) halogen or trihalomethyl; and  
 (v) five-membered or six-membered heteroaryl ring moiety;  
 (e)  $R_3$ ,  $R_4$ ,  $R_5$ ,  $R_6$ ,  $R_7$ ,  $R_8$  and  $R_9$  are independently selected from the group consisting of:

(i) hydrogen;  
 (ii) saturated or unsaturated alkyl;  
 (iii)  $NX_4X_5$ , where  $X_4$  and  $X_5$  are independently selected from the group consisting of hydrogen and saturated or unsaturated alkyl;  
 (iv) halogen or trihalomethyl;  
 (v)  $C(X_6)_3$ , where  $X_6$  is selected from the group consisting of fluorine, chlorine, bromine and iodine;  
 (vi)  $-OX_7$ , where  $X_7$  is selected from the group consisting of hydrogen, saturated or unsaturated alkyl, and a five-membered or six-membered aryl or heteroaryl ring moiety;

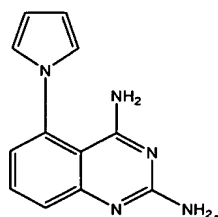
(f) any adjacent  $R_3$ ,  $R_4$ , and  $R_5$  or any adjacent  $R_6$ ,  $R_7$ ,  $R_8$  and  $R_9$  are fused together to form a five-membered or six-membered heteroaryl or six-membered aryl ring moiety, wherein said five-membered or six-membered aryl or six-membered heteroaryl ring comprises two carbon atoms of said quinazoline compound to which  $R_3$ ,  $R_4$ , and  $R_5$  or  $R_6$ ,  $R_7$ ,  $R_8$ , and  $R_9$  are attached;

(g)  $R_{11}$  and  $R_{12}$  are independently selected from the group consisting of

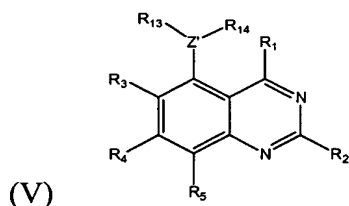
(i) hydrogen; and  
 (ii) saturated or unsaturated alkyl; and

(h)  $Z'$  is nitrogen and  $R_{13}$  and  $R_{14}$  taken together form a five-membered or six-membered heteroaryl ring with  $Z'$  as a ring member, wherein said ring is optionally substituted with one, two, or three alkyl, halogen, trihalomethyl, carboxylate, and ester moieties;

with the proviso that the compound of formula (I) or (III) is not

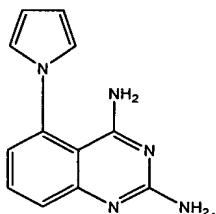


28. (Twice amended) A quinazoline compound having the structure set forth in formula V:



wherein:

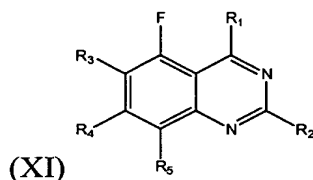
- C7
- (a)  $R_1$  and  $R_2$  are independently selected from the group consisting of:
- (i) hydrogen;
  - (ii)  $NX_1X_2$ , where  $X_1$  and  $X_2$  are independently selected from the group consisting of hydrogen and saturated or unsaturated alkyl; and
  - (iii) benzyl;
- (b)  $R_3$ ,  $R_4$ , and  $R_5$  are independently selected from the group consisting of:
- (i) hydrogen;
  - (ii) saturated or unsaturated alkyl; and
  - (iii)  $NX_3X_4$ , where  $X_3$  and  $X_4$  are independently selected from the group consisting of hydrogen and saturated or unsaturated alkyl;
- (c)  $Z'$  is nitrogen and  $R_{13}$  and  $R_{14}$  taken together form a five-membered heteroaryl ring;
- with the proviso that the compound of formula (V) is not



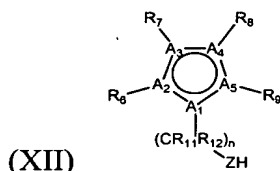

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34. (Twice amended) A method for synthesizing a compound of claim 26, comprising the steps of:

- C8
- (a) reacting a first reactant with a second reactant to yield said compound, wherein said first reactant has a structure of formula XI:



and wherein said second reactant has a structure of formula (XII):



wherein,

- (a) Z is oxygen or sulfur;
- (b) n is 0, 1, 2, 3, or 4;
- (c) A<sub>2</sub>, A<sub>3</sub>, A<sub>4</sub>, and A<sub>5</sub> are independently selected from the group consisting of carbon, nitrogen, oxygen, and sulfur, provided that if any of A<sub>2</sub>, A<sub>3</sub>, A<sub>4</sub> and A<sub>5</sub> is nitrogen, oxygen, or sulfur, said A<sub>2</sub>, A<sub>3</sub>, A<sub>4</sub> and A<sub>5</sub> is not substituted with R<sub>6</sub>, R<sub>7</sub>, R<sub>8</sub> or R<sub>9</sub>;
- A<sub>1</sub> is carbon or nitrogen;
- (d) R<sub>1</sub> and R<sub>2</sub> are independently selected from the group consisting of:
- (i) hydrogen;
  - (ii) saturated or unsaturated alkyl;
  - (iii) NX<sub>2</sub>X<sub>3</sub>, where X<sub>2</sub> and X<sub>3</sub> are independently selected from the group consisting of hydrogen and saturated or unsaturated alkyl;
  - (iv) halogen or trihalomethyl; and
  - (v) five-membered or six-membered heteroaryl ring moiety;
- (e) R<sub>3</sub>, R<sub>4</sub>, R<sub>5</sub>, R<sub>6</sub>, R<sub>7</sub>, R<sub>8</sub>, and R<sub>9</sub> are independently selected from the group consisting of:
- (i) hydrogen;
  - (ii) saturated or unsaturated alkyl;
  - (iii) NX<sub>13</sub>X<sub>14</sub>, where X<sub>13</sub> and X<sub>14</sub> are independently selected from the group consisting of hydrogen, saturated or unsaturated alkyl, and five-membered or six-membered aryl or heteroaryl ring moieties;

(iv) halogen or trihalomethyl;

(v) a ketone of formula  $-\text{CO}-\text{X}_4$ , where  $\text{X}_4$  is selected from the group consisting of hydrogen, alkyl, and five-membered or six-membered heteroaryl or six-membered aryl ring moieties;

(vi) a carboxylic acid of formula  $-(\text{X}_5)_{n5}-\text{COOH}$  or ester of formula  $-(\text{X}_6)_{n6}-\text{COOX}_7$ , where  $\text{X}_5$ ,  $\text{X}_6$ , and  $\text{X}_7$  are independently selected from the group consisting of alkyl and five-membered or six-membered heteroaryl or six-membered aryl ring moieties and where  $n5$  and  $n6$  are 0 or 1;

(vii) an alcohol of formula  $-(\text{X}_8)_{n8}-\text{OH}$  or an alkoxy moiety of formula  $-(\text{X}_8)_{n8}-\text{OX}_9$ , where  $\text{X}_8$  and  $\text{X}_9$  are independently selected from the group consisting of alkyl and five-membered or six-membered heteroaryl or six-membered aryl ring moieties and where  $n8$  is 0 or 1, and where said ring moieties are optionally substituted with one or more substituents selected from the group consisting of alkyl, halogen, trihalomethyl, carboxylate, and ester;

(viii)  $-\text{NHCOX}_{10}$ , where  $\text{X}_{10}$  is selected from the group consisting of alkyl, hydroxyl, and five-membered or six-membered heteroaryl or six-membered aryl ring moieties, wherein said ring moieties are optionally substituted with one or more substituents selected from the group consisting of alkyl, halogen, trihalomethyl, carboxylate, and ester;

(ix)  $-\text{SO}_2\text{NX}_{11}\text{X}_{12}$ , where  $\text{X}_{11}$  and  $\text{X}_{12}$  are selected from the group consisting of hydrogen, alkyl, and five-membered or six-membered heteroaryl or six-membered aryl ring moieties; and

(x) a five-membered or six-membered heteroaryl or six-membered aryl ring moiety optionally substituted with one or more substituents selected from the group consisting of alkyl, halogen, trihalomethyl, carboxylate, and ester moieties;

(f) any adjacent  $\text{R}_3$ ,  $\text{R}_4$ , and  $\text{R}_5$  or any adjacent  $\text{R}_6$ ,  $\text{R}_7$ ,  $\text{R}_8$ , and  $\text{R}_9$  are fused together to form a five-membered or six-membered heteroaryl or six-membered aryl ring moiety wherein said five-membered or six-membered heteroaryl or six-membered aryl ring comprises two carbon atoms of the ring to which  $\text{R}_3$ ,  $\text{R}_4$ , and  $\text{R}_5$  or  $\text{R}_6$ ,  $\text{R}_7$ ,  $\text{R}_8$ , and  $\text{R}_9$  are attached;

(g)  $\text{R}_{11}$  and  $\text{R}_{12}$  are independently selected from the group consisting of

(i) hydrogen; and

(ii) saturated or unsaturated alkyl; and

(b) collecting a precipitate comprising said compound.